

Application Serial No.:
09/920,227

Attorney Docket No.:
SP01-193

Amendments to the Claims:

1. (*Currently Amended*) A method of making fused silica, comprising:
generating a plasma;
delivering reactants comprising a silica precursor into the plasma to produce silica particles; and
depositing the silica particles on a rotating horizontal deposition surface of a substrate on a rotating table while at the same time consolidating the particles to form glass.
2. (*Original*) The method of claim 1, wherein delivering reactants comprising a silica precursor into the flame further comprises delivering a dopant material into the plasma to form doped silica particles.
3. (*Original*) The method of claim 2, wherein the dopant material comprises a compound capable of being converted to an oxide of at least one member of the group consisting of B, Al, Ge, K, Ca, Sn, Ti, P, Se, Er, and S.
4. (*Original*) The method of claim 2, wherein the dopant material comprises a fluorine compound.
5. (*Original*) The method of claim 4, wherein the fluorine compound is selected from the group consisting of CF_4 , $\text{CF}_x\text{Cl}_{4-x}$, where x ranges from 1 to 3, NF_3 , SF_6 , SiF_4 , C_2F_6 , and F_2 .
6. (*Original*) The method of claim 1, wherein the plasma is generated by induction with a high frequency generator.
7. (*Original*) The method of claim 1, wherein the silica precursor is substantially free of hydrogen.
8. (*Original*) The method of claim 7, wherein the silica precursor comprises SiCl_4 .

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9. (*Original*) The method of claim 1, wherein the glass is formed in an enclosure having a water vapor content less than 1 ppm by volume.

10. (*Canceled*)

11. (*Previously Presented*) The method of claim 4, wherein the silica precursor and fluorine compound are delivered into the plasma in gaseous form.

12. (*Previously Presented*) The method of claim 4, wherein the silica precursor is substantially free of hydrogen.

13. (*Original*) The method of claim 12, wherein the silica precursor comprises SiCl_4 .

14. (*Previously Presented*) The method of claim 4, wherein the fluorine compound is selected from the group consisting of CF_4 , $\text{CF}_x\text{Cl}_{4-x}$, where x ranges from 1 to 3, NF_3 , SF_6 , SiF_4 , C_2F_6 , and F_2 .

15. (*Previously Presented*) The method of claim 4, wherein the glass is formed in an enclosure having a water vapor content less than 1 ppm by volume.

16-23. (*Canceled*)